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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/750,581

12/29/2003

Robert E. Higashi

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EXAMINER

ECHELMMEYER, ALIX ELIZABETH

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

01/06/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<p align="center"><b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b></p>	<p><b>Application No.</b> 10/750,581</p>	<p><b>Applicant(s)</b> HIGASHI ET AL.</p>	
	<p><b>Examiner</b> Alix Elizabeth Echelmeyer</p>	<p><b>Art Unit</b> 1795</p>	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 22 December 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: \_\_\_\_\_.
- Claim(s) objected to: \_\_\_\_\_.
- Claim(s) rejected: \_\_\_\_\_.
- Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_
13. ☐ Other: \_\_\_\_\_.

/PATRICK RYAN/  
Supervisory Patent Examiner, Art Unit 1795

Continuation of 11. does NOT place the application in condition for allowance because: the arguments are not persuasive.

Beginning on page 10, Applicant discusses the Claim Interpretation, and also argues that the enablement rejection and art rejection cannot be made at the same time. Applicant has seen a comment that was made on an earlier draft of the rejection. The enablement rejection was made over the interpretation that Applicant wishes to be made of the claims - that there is no catalyst layer between the membrane and the electrode. The art rejection was made over an interpretation that would be enabled - that the catalyst layers are applied to the membrane such that a catalyst layer is found between the membrane and the electrode and that the reactants pass through the catalyst layer. A statement to this effect is made on page 5 of the rejection, at paragraph 7. The rejections are proper.

Still on page 10, Applicant argues the examiner's interpretation of the method claims, specifically of the claims including a laminating step. One of ordinary skill in the art recognizes that laminating includes uniting layers of material by adhesive. A structure of layers of material united by adhesive is taught in Pratt et al. - thus, the laminating step is inherently taught.

As for the 112 rejection, Applicant first argues the rejection made by the examiner that the fuel cell unit cannot operate without a catalyst layer. The passage from the instant specification cited by Applicant specifically includes language that indicates that the catalyst layer is OPTIONAL. In other words, the specification does not require that the catalyst layer be included. Previous to the sentence that states that the membrane can further include a top and bottom catalyst layer, there is no statement in the specification that the membrane MUST include a catalyst layer. The examiner holds that the catalyst layer is required in the area where the reactants are directed to the membrane for the fuel cell to be enabled. This is not found in the claims, when the claims are interpreted in light of the specification, specifically Figures 1D, 2D, 3C, 4C.

Applicant cites the Watanabe reference to support their argument that a catalyst layer is not required for a fuel cell to be operable. Clearly, Applicant either does not understand the Watanabe reference, or has not read it. Watanabe et al. teach a membrane for a fuel cell that has catalyst particles included in the membrane IN ADDITION to the catalyst layers that are formed on the membrane. Applicant is directed to Watanabe et al. at Figures 1 and 2, and column lines 37-44, where it is clearly taught that the membrane (1) has catalyst layers (2) and (3) on the upper and lower sides of the membrane. Applicant is next directed to Watanabe et al. at column 5 line 66 to column 6 line 8, where it is taught that the inventive membrane of Watanabe et al. includes metal catalyst particles contained in the membrane. These catalyst particles are in addition to the catalyst layers. Cell D of Watanabe et al., which Applicant alleges to teach the use of a membrane in a fuel cell with no catalyst layers, ACTUALLY teaches a membrane with catalyst layers, as in Figures 1 and 2, but with no catalyst particles included in the membrane.

Next, on page 13, Applicant discusses the rejection concerning the shorting of the fuel cell. Applicant asserts that the examiner has incorrectly interpreted Figure 7, stating that the "electrical contacts 750A and 750B are separated by the insulating component of the electrode layer ... one cannot properly assert that [the electrical contacts] are present in a location which would enable direct electrical connection between electrical contacts 750A and 750B ..." (bottom of page 13). Applicant is directed to the instant specification, at page 14, where it is stated that the electrical contact 750A on the top electrode 710A may be electrically connected to the electrical contact 750B on the bottom electrode 710B. When this connection occurs, the cell would short.

Beginning on page 15, Applicant argues the 102 rejection over Pratt et al. According to Applicant, since the word "adhesive" or "adhesives" occurs only once in the reference, it can be ignored and the reference does not actually teach an adhesive - because it is only mentioned once. The examiner strongly disagrees. Pratt et al. teach a laminated structure comprising the MEA held together by ultrasonic welding or adhesives. The fact that this is taught in only one sentence DOES NOT mean that it is not taught. One of ordinary skill in the art would recognize that the use of an adhesive instead of an ultrasonic weld is taught by Pratt et al. Additionally, one of ordinary skill in the art would recognize that if such a replacement were made, the adhesive would have to be conductive in order to perform the same function as the weld - to attach as well as conduct electricity. The rejection made of Pratt et al. should be clearly understood by one having ordinary skill in the art.

With regard to claim 47, this has been addressed in the rejection, on page 6 as well as page 7. Applicant can also look at Figure 3 of Pratt et al., where the conductive connections (26) and (32) are connected through the plastic film when the connection is made, for example, on the top electrode (see also Figure 4). This also applies to claim 63.

On page 24, Applicant discusses the Simonton reference. The examiner apologizes for the typographical error in the citation. The part of the reference that is cited is column 3 lines 12-25. However, since the reference "only" has ten columns, surely Applicant can read five pages of text to find the pertinent teachings.

In summary, the examiner is unconvinced that a fuel cell can operate without a catalyst layer. Watanabe et al. do not teach such a fuel cell. Additionally, Applicant has not shown that Pratt et al. do not teach an adhesive - since Pratt et al. do teach an adhesive, but Applicant feels that one mention of an adhesive does not constitute a teaching of an adhesive.